

June 06, 2016

Meagan E. Ormand
Golder Associates Inc.
2108 W. Laburnum Ave.
Suite 200
Richmond, VA 23227

RE: Project: BREMO MONTHLY PROCESS
Pace Project No.: 92300032

Dear Meagan Ormand:

Enclosed are the analytical results for sample(s) received by the laboratory on June 03, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole Gasiorowski
nicole.gasiorowski@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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June 06, 2016

Page 2

cc: Ron DiFrancesco, Golder Associates Inc.
Martha Smith, Golder Associates Inc.
Mike Williams, Golder Associates Inc



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92300032001	T1-160603-1040-S3	EPA 200.7	CKJ	8	PASI-O
92300032002	T2-160603-1325-S3	EPA 200.7	CKJ	8	PASI-O

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Method: EPA 200.7

Description: 200.7 MET ICP

Client: Golder_Dominion_Bremo

Date: June 06, 2016

General Information:

2 samples were analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Sample: T1-160603-1040-S3		Lab ID: 92300032001		Collected: 06/03/16 10:40		Received: 06/03/16 14:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.7 MET ICP		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	337	ug/L	100	1	06/04/16 12:46	06/04/16 16:45	7429-90-5		
Barium	211	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:45	7440-39-3		
Beryllium	ND	ug/L	1.0	1	06/04/16 12:46	06/04/16 16:45	7440-41-7		
Boron	461	ug/L	50.0	1	06/04/16 12:46	06/04/16 16:45	7440-42-8		
Cobalt	ND	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:45	7440-48-4		
Iron	ND	ug/L	250	1	06/04/16 12:46	06/04/16 16:45	7439-89-6		
Molybdenum	95.6	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:45	7439-98-7		
Vanadium	28.0	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:45	7440-62-2		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Sample: T2-160603-1325-S3		Lab ID: 92300032002		Collected: 06/03/16 13:23		Received: 06/03/16 14:10		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.7 MET ICP		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	324	ug/L	100	1	06/04/16 12:46	06/04/16 16:56	7429-90-5		
Barium	163	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:56	7440-39-3		
Beryllium	ND	ug/L	1.0	1	06/04/16 12:46	06/04/16 16:56	7440-41-7		
Boron	416	ug/L	50.0	1	06/04/16 12:46	06/04/16 16:56	7440-42-8		
Cobalt	ND	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:56	7440-48-4		
Iron	ND	ug/L	250	1	06/04/16 12:46	06/04/16 16:56	7439-89-6		
Molybdenum	68.4	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:56	7439-98-7		
Vanadium	21.4	ug/L	10.0	1	06/04/16 12:46	06/04/16 16:56	7440-62-2		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

QC Batch:	MPRP/30839	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples: 92300032001, 92300032002			

METHOD BLANK: 1595441 Matrix: Water

Associated Lab Samples: 92300032001, 92300032002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	06/04/16 16:37	
Barium	ug/L	ND	10.0	06/04/16 16:37	
Beryllium	ug/L	ND	1.0	06/04/16 16:37	
Boron	ug/L	ND	50.0	06/04/16 16:37	
Cobalt	ug/L	ND	10.0	06/04/16 16:37	
Iron	ug/L	ND	250	06/04/16 16:37	
Molybdenum	ug/L	ND	10.0	06/04/16 16:37	
Vanadium	ug/L	ND	10.0	06/04/16 16:37	

LABORATORY CONTROL SAMPLE: 1595442

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	2500	2600	104	85-115	
Barium	ug/L	250	260	104	85-115	
Beryllium	ug/L	25	26.5	106	85-115	
Boron	ug/L	2500	2610	104	85-115	
Cobalt	ug/L	250	264	105	85-115	
Iron	ug/L	2500	2560	103	85-115	
Molybdenum	ug/L	250	255	102	85-115	
Vanadium	ug/L	250	257	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1595443 1595444

Parameter	Units	92300032001		MS		MSD		MS		MSD		% Rec		RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	% Rec	Limits		
Aluminum	ug/L	337	2500	2500	2980	2900	106	102	70-130	3					
Barium	ug/L	211	250	250	485	468	109	103	70-130	3					
Beryllium	ug/L	ND	25	25	26.7	26.2	107	105	70-130	2					
Boron	ug/L	461	2500	2500	3110	3050	106	104	70-130	2					
Cobalt	ug/L	ND	250	250	269	262	107	105	70-130	3					
Iron	ug/L	ND	2500	2500	2700	2620	104	101	70-130	3					
Molybdenum	ug/L	95.6	250	250	364	351	107	102	70-130	4					
Vanadium	ug/L	28.0	250	250	293	286	106	103	70-130	3					

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

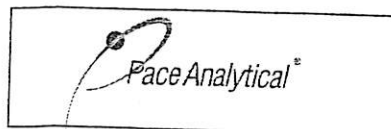
Project: BREMO MONTHLY PROCESS

Pace Project No.: 92300032

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92300032001	T1-160603-1040-S3	EPA 200.7	MPRP/30839	EPA 200.7	ICP/18438
92300032002	T2-160603-1325-S3	EPA 200.7	MPRP/30839	EPA 200.7	ICP/18438

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
Document No.:
F-MEC-CS-009-rev.02

Document Revised: 26FEB2016
Page 1 of 2
Issuing Authority:
Pace Mechanicsville Quality Office

Sample Condition Upon Receipt

Client Name:

Golder

Project #:

WO#: 92300032



Page 2 of 2 for Internal Use ONLY

Courier:

☐ Commercial

☐ Fed Ex

☐ UPS

☐ USPS

☐ Client

☒ Pace

☐ Other:

Custody Seal Present?

☒ Yes

☐ No

Seals Intact?

☒ Yes

☐ No

Packing Material:

☐ Bubble Wrap

☒ Bubble Bags

☐ None

☐ Other:

Thermometer:

☒ RMD001

☐

Type of Ice:

☒ Wet

☐ Blue

☐ None

Date/Initials Person Examining Contents: 6/3/16

☒ Samples on ice, cooling process has begun

Correction Factor: 0.0°C

Cooler Temp Corrected (°C):

3.7

Biological Tissue Frozen?

☐ Yes

☐ No

☐ N/A

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Chain of Custody Present?

☒ Yes

☐ No

☐ N/A

1.

Chain of Custody Filled Out?

☒ Yes

☐ No

☐ N/A

2.

Chain of Custody Relinquished?

☒ Yes

☐ No

☐ N/A

3.

Sampler Name and/or Signature on COC?

☒ Yes

☐ No

☐ N/A

4.

Samples Arrived within Hold Time?

☒ Yes

☐ No

☐ N/A

5.

Short Hold Time Analysis (<72 hr)?

☐ Yes

☒ No

☐ N/A

6.

Rush Turn Around Time Requested?

☒ Yes

☐ No

☐ N/A

7.

Sufficient Volume?

☒ Yes

☐ No

☐ N/A

8.

Correct Containers Used?

☒ Yes

☐ No

☐ N/A

9.

-Pace Containers Used?

☒ Yes

☐ No

☐ N/A

Containers Intact?

☒ Yes

☐ No

☐ N/A

10.

Filtered Volume Received for Dissolved Tests?

☐ Yes

☐ No

☒ N/A

11.

Sample Labels Match COC?

☒ Yes

☐ No

☐ N/A

12.

-Includes Date/Time/ID/Analysis Matrix: WW

All containers needing acid/base preservation have been checked?

☒ Yes

☐ No

☐ N/A

13.

All containers needing preservation are found to be in compliance with EPA recommendation?

☒ Yes

☐ No

☐ N/A

(HNO₃, H₂SO₄, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)

Exceptions: VOA, Coliform, TOC, Oil and Grease,

DRO/8015 (water) DOC,LLHg

☐ Yes

☐ No

☐ N/A

Samples checked for dechlorination

☐ Yes

☐ No

☒ N/A

14.

Headspace in VOA Vials (>5-6mm)?

☐ Yes

☐ No

☒ N/A

15.

Trip Blank Present?

☐ Yes

☐ No

☒ N/A

16.

Trip Blank Custody Seals Present?

☐ Yes

☐ No

☒ N/A

Pace Trip Blank Lot # (if purchased):

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted:

Date/Time:

Comments/Resolution:

Project Manager SCURF Review:

NMG

Date:

6/6/16

Project Manager SRF Review:

NMG

Date:

6/3/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Goldier Associates	Report To:	Mormand@golder.com	Attention:	Meagan Ormand
Address:	2108 W Laburnum Ave, Ste 200	Copy To:	Martha_Smith@golder.com	Company Name:	Goldier Associates
	Richmond, VA 23227	Purchase Order No.:	Ron_Difrancesco@golder.com	Address:	galapdataentry_invoices@golder.com
Email To:	Mormand@golder.com	Project Name:	Bremno Monthly Compliance Projects	Reference:	Pace Quote
Phone:	804-551-0129	Fax:	804-358-2900	Reference:	Pace Project Manager
Requested Due Date/AT:	24 HOUR	Project Number:	1520-347-220	Pace Profile #:	

REGULATORY AGENCY		Site Location	
<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER	<input type="checkbox"/> OTHER
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA		
STATE: VA			

Section D Required Client Information		Valid Matrix Codes MATRIX CODE		COLLECTED		SAMPLE TEMP AT COLLECTION		Preservatives		Analysis Test		Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)		Pace Project No./ Lab I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
DRINKING WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIP AIR OTHER TISSUE		CODE DW WT WW P SL OL WP AR OT TS		COMPOSITE START		COMPOSITE END/GRAB				↓ Analysis Test ↓		Y	N																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS			
All analyses to be performed under Goldier-Pace MSA dated 12/19/2008		[Signature] (Goldier)		6/3/16	1410	[Signature]		6/3	210	Temp in °C	3.7	Received on Ice (Y/N)	Y
										Custody Sealed Cooler (Y/N)	Y	Samples Intact (Y/N)	Y

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Pace Analytical Services
Suite 100
9800 Kincey Ave
Huntersville NC 28078

Report Date: June 06, 2016

Project: 92300032

Submittal Date: 06/04/2016
Group Number: 1668507
PO Number: NMG 15566
State of Sample Origin: VA

Client Sample Description

T1-160603-1040-S3 Water Sample
T2-160603-1325-S3 Water Sample

Lancaster Labs
(LL) #
8410941
8410942

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Pace Analytical Services

Attn: Nicole Gasiorowski

Respectfully Submitted,



Bonnie Stadelmann
Senior Project Manager

(312) 590-3133

Sample Description: T1-160603-1040-S3 Water Sample
92300032001
92300032

LL Sample # WW 8410941
LL Group # 1668507
Account # 10945

Project Name: 92300032

Collected: 06/03/2016 10:40

Pace Analytical Services

Submitted: 06/04/2016 09:45

Suite 100

Reported: 06/06/2016 15:32

9800 Kinsey Ave

Huntersville NC 28078

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
12941	Free Cyanide	n.a.	< 10.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12941	Free Cyanide	OIA-1677-09	1	16157941101A	06/05/2016 18:39	Joseph E McKenzie	1

Sample Description: T2-160603-1325-S3 Water Sample
92300032002
92300032

LL Sample # WW 8410942
LL Group # 1668507
Account # 10945

Project Name: 92300032

Collected: 06/03/2016 13:23

Pace Analytical Services

Suite 100

Submitted: 06/04/2016 09:45

9800 Kinsey Ave

Reported: 06/06/2016 15:32

Huntersville NC 28078

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
12941	Free Cyanide	n.a.	< 10.0	10.0	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12941	Free Cyanide	OIA-1677-09	1	16157941101A	06/05/2016 18:41	Joseph E McKenzie	1

Quality Control Summary

Client Name: Pace Analytical Services
Reported: 06/06/2016 15:32

Group Number: 1668507

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ
	mg/l	mg/l
Batch number: 16157941101A	Sample number(s): 8410941-8410942	
Free Cyanide	< 10.0	10.0

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16157941101A	Sample number(s): 8410941-8410942								
Free Cyanide	0.0400	0.0411			103		86-132		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16157941101A	Sample number(s): 8410941-8410942 UNSPK: P407127									
Free Cyanide	< 0.030	0.100	0.104	0.100	0.113	104	113	86-132	9*	3

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 16157941101A	Sample number(s): 8410941-8410942 BKG: P407127			
Free Cyanide	< 0.030	< 0.030	0 (1)	20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chain of Custody

10945 | 1668507 | 8410941-42



Workorder: 92300032

Workorder Name: BREMO MONTHLY PROCESS

Results Requested By: 6/6/2016

Report / Invoice To		Subcontract To		Requested Analysis																				
Nicole Gasiorowski Pace Analytical Charlotte 9800 Kincey Ave. Suite 100 Huntersville, NC 28078 Phone (704)875-9092 Email: nicole.gasiorowski@pacelabs.com		Sample Administration P.O. NMG 15566 Eurofins Lancaster Laboratories Env. 2425 New Holland Pike Lancaster, PA 17601																						
State of Sample Origin: VA				Preserved Containers								Free Cyanide CIA-1677				LAB USE ONLY								
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	1	2	3	4	5	6	7									8	9	10	11	12
1	T1-160603-1040-S3	6/3/2016 10:40	92300032001	Water	2																			
2	T2-160603-1325-S3	6/3/2016 13:23	92300032002	Water	2																			
3																								
4																								
Comments																								
Transfers	Released By	Date/Time	Received By	Date/Time																				
1	Rachel Bunniss	6/3/16 1635																						
2																								
3			Wanda Abo	6/4/16 0945																				
Cooler Temperature on Receipt 2.1 °C		Custody Seal Y or (N)		Received on Ice (Y) or N		Samples Intact (Y) or N																		

Client: Pace Analytical

Delivery and Receipt Information

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>06/04/2016 9:45</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 10:15 on 06/04/2016

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	32170023	5.1	IR	Wet	Y	Loose	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
µg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	µL	microliter(s)
		pg/L	picogram/liter
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/L), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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